NO:33, SEQ ID NO: 34; SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, and SEQ ID NO:39.

SUPPORT FOR AMENDMENTS

Claim 43 is rewritten to recite allowable subject matter in independent form as per Examiner's suggestion. New claims 53-59 are supported by the claims as filed and throughout the specification as filed, for example, on page 17, lines 14-16, and on page 20, lines 8-9. Thus, the new claims do not introduce new matter.

REMARKS

Election/Restriction

The Applicants gratefully acknowledge the Office's decision to reinstate and reconsider claims 35-37.

Claim Rejections Under 35 USC §112

The Applicants gratefully acknowledge the Office's decision to withdraw rejection of claims 1-2, 31-33, 38 and 40-44 under 35 U.S.C. §112, second paragraph.

Claim Rejections Under 35 USC §103(a)

3. Claims 1-2, 31-33, 35-38 and 40-42 remain rejected under 35 U.S.C. §103(a) as being unpatentable over Mrug et al. in view of Pfeilschifter et al. for the reasons set forth in the previous office action.

The Office asserted that it would be obvious to one of skill in the art to use AII(1-6) to augment erythropoiesis in view of Mrug et al., which is asserted to teach AII

stimulation of erythropoiesis via the AT1 receptor, and Pfeilschifter et al., which is asserted to teach that AII(1-6) shows some 'affinity' for the AT1 receptor. The Applicants traverse the rejection.

The Applicants respectfully contend that one of skill in the art would not find that the combination of Mrug and Pfeilshifter makes it obvious that AII(1-6) would stimulate erythropoiesis for the following reasons:

(1) Pfeilshifter teaches nothing at all about any effect of any compound on erythropoiesis.

(2) It is known in the art that AII(1-7) does not act via the AT1 receptor as taught explicitly in Ferrario et al. (Ferrario, C.M., et al. *J. Am. Soc. Nephrol.*, 9:1716-1722 (1998)) previously submitted by the Applicants.

(3) Pfeilschifter et al. demonstrate that the effect of AII(1-6) on choline formation in mesangial cells shown in figure 4 is virtually identical to that of AII(1-7) or control, which is significantly weaker than that of AII.

(4) Pfeilschifter et al. do not demonstrate, nor do they suggest that the weak effects of AII(1-6) or AII(1-7) are mediated via the AT1 receptor.

Based on the above, one of skill in the art would not find it obvious that AII(1-6) would have similar effects to AII in mesangial cells, and would in fact believe that AII(1-6) does not activate choline formation via the AT1 receptor, similarly to AII(1-7).

Furthermore, one of skill in the art would certainly not find that the cited references make it obvious that AII would have the same effect on erythropoiesis as AII, since the AII and AII(1-6) effects were significantly different in mesangial cells.

In summary, the combination of Mrug et al. and Pfeilschifter et al. would teach one of skill in the art that AII(1-6) does not act via AT1 receptor and teach away from using it to stimulate erythropoiesis in view of Mrug et al. and Pfeilschifter et al.

However, solely in order to expedite prosecution of instant application, the Applicants have canceled rejected claims. The rejection under 35 U.S.C.§103(a) is thus made moot due to the cancellation of the claims.

Double Patenting

5. The Office rejected claims 1-2, 31-33, 35-38 and 40-42 for obviousness-type double patenting as being unpatentable over claims 1-11 of US Patent No. 6,239,109.

These claims have been canceled, thus obviating the rejection.

Other Issue

6. The Office stated that claims 43-52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Applicants have rewritten claim 43 in independent form including all of the limitations of the previous base claim (claim 1) as per the Office's suggestion.

CONCLUSION

The Applicants believe that the application is now in condition for allowance based on the foregoing remarks and amendments. If there is any problem, the Examiner is respectfully invited to contact the undersigned attorney at (312) 913-2106.

Respectfully submitted,

2/10/03

David S. Harper
Registration No. 42,636

APPENDIX A:MARKED-UP VERSION OF CURRENTLY PENDING CLAIMS

[1.(Canceled) ~~A method for augmenting erythropoiesis comprising contacting erythroid progenitor cells with an amount effective to augment erythropoiesis of at least one active agent comprising a sequence of at least three contiguous amino acids of groups R^1-R^8 in the sequence of general formula I~~

~~R^1-R^2-R^3-R^4-R^5-R^6-R^7-R^8~~

~~wherein R^1 is selected from Asp, Glu, Asn, Acpc, Ala, Me^2Gly, Pro, Bet, $Glu(NH_2)$, Gly, $Asp(NH_2)$ and Suc;~~

~~R^2 is selected from Arg, Lys, Ala, Orn, Ser(Ac), Sar, D-Arg and D-Lys;~~

~~R^3 is selected from the group consisting of Val, Ala, Leu, norLeu, Ile, Gly, Pro, Aib, Acpc, Lys and Tyr;~~

~~R^4 is selected from the group consisting of Tyr, $Tyr(PO_3)_2$, Thr, Ser, Ala, homoSer and azaTyr;~~

~~R^5 is selected from the group consisting of Ile, Ala, Leu, norLeu, Val and Gly;~~

~~R^6 is selected from the group consisting of His, Arg or 6-NH_2-Phe;~~

~~R^7 is selected from the group consisting of Pro or Ala; and~~

~~R^8 is selected from the group consisting of Phe, Phe(Br), Ile and Tyr[,];~~

~~excluding sequences including R^4 as a terminal Tyr group, and~~

~~wherein the active agent is not SEQ ID NO:1 or SEQ ID NO:19,~~

~~for a time and under conditions effective to augment erythropoiesis.~~]

[2. (Canceled) ~~The method of claim 1 wherein the active agent comprises a sequence selected from the group consisting of angiotensinogen, SEQ ID NO:2, SEQ ID NO:3,~~

~~SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO: 32, SEQ ID NO:33, SEQ ID NO: 34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, and SEQ ID NO:39.~~]

[31.(Canceled) ~~The method of claim 1 wherein the active agent comprises a sequence of at least four contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.~~

32.(Canceled) ~~The method of claim 1 wherein the active agent comprises a sequence of at least five contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.~~

33.(Canceled) ~~The method of claim 1 wherein the active agent comprises a sequence of at least six contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.~~]

[35. (Canceled) ~~The method of claim 1 wherein the active agent consists essentially of a sequence of at least three contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.~~

36. (Canceled) ~~The method of claim 1 wherein the active agent consists essentially of a sequence of at least four contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.~~

37. (Canceled) ~~The method of claim 1 wherein the active agent consists essentially of a sequence of at least five contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.~~

38. (Canceled) ~~The method of claim 1 wherein the active agent consists essentially of a sequence of at least six contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.~~

40.(Canceled) ~~The method of claim 1 wherein the contacting occurs in vivo and a dosage of active agent is between 0.1 ng/kg and 10.0 mg/kg.~~

41.(Canceled) ~~The method of claim 1 wherein the contacting occurs in vitro and a dosage of active agent is between 0.1 ng/ml and 10.0 mg/ml.~~

42.(Canceled) ~~The method of claim 1 further comprising contacting the erythroid progenitor cells with an amount effective to augment erythropoiesis of erythropoietin.~~]

43.(Amended) **A**[~~The~~] method **for augmenting erythropoiesis comprising contacting erythroid progenitor cells with an amount effective to augment erythropoiesis of at least one active agent comprising a sequence of at least three contiguous amino acids of groups R^1-R^8 in the sequence of general formula I**

R^1-R^2-R^3-R^4-R^5-R^6-R^7-R^8

wherein R^1 is selected from Asp, Glu, Asn, Acpc, Ala, Me^2Gly, Pro, Bet, Glu(NH_2), Gly, Asp(NH_2) and Suc;

R^2 is selected from Arg, Lys, Ala, Orn, Ser(Ac), Sar, D-Arg and D-Lys;

R^3 is selected from the group consisting of Val, Ala, Leu, norLeu, Ile, Gly, Pro, Aib, Acpc, Lys and Tyr;

R^4 is selected from the group consisting of Tyr, Tyr(PO_3)$_2$, Thr, Ser, Ala, homoSer and azaTyr;

R^5 is selected from the group consisting of Ile, Ala, Leu, norLeu, Val and Gly;

R^6 is selected from the group consisting of His, Arg or 6-NH_2-Phe;

R^7 is selected from the group consisting of Pro or Ala; and

R^8 is selected from the group consisting of Phe, Phe(Br), Ile and Tyr;

excluding sequences including R^4 as an N-terminal Tyr group, and

wherein the active agent is not SEQ ID NO:1 or SEQ ID NO:19,

for a time and under conditions effective to augment erythropoiesis

[~~of claim1~~], wherein the method is used to treat anemia associated with a condition selected from the group consisting of chronic renal failure, end-stage renal disease, renal transplantation, cancer, acquired immune deficiency syndrome, chemotherapy, radiotherapy, bone marrow transplantation.

44.(Unchanged) The method of claim 43, further comprising contacting the erythroid progenitor cells with an amount effective to augment erythropoiesis of erythropoietin.

45. (Unchanged) The method of claim 43, wherein the anemia is associated with chronic renal failure.

46. (Unchanged) The method of claim 43, wherein the anemia is associated with end-stage renal disease.

47. (Unchanged) The method of claim 43, wherein the anemia is associated with renal transplantation.

48. (Unchanged) The method of claim 43, wherein the anemia is associated with cancer.

49. (Unchanged) The method of claim 43, wherein the anemia is associated with acquired immune deficiency syndrome.

50. (Unchanged) The method of claim 43, wherein the anemia is associated with chemotherapy.

51. (Unchanged) The method of claim 43, wherein the anemia is associated with radiotherapy.

52. (Unchanged) The method of claim 43, wherein the anemia is associated with bone marrow transplantation.

53.(New) The method of claim 43 wherein the active agent comprises a sequence of at least four contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.

54.(New) The method of claim 43 wherein the active agent comprises a sequence of at least five contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.

55.(New) The method of claim 43 wherein the active agent consists of a sequence of at least three contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.

56.(New) The method of claim 43 wherein the active agent consists of a sequence of at least four contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.

57.(New) The method of claim 43 wherein the active agent consists of a sequence of at least five contiguous amino acids of groups R^1-R^8 in the sequence of general formula I.

58.(New) The method of claim 43 wherein the active agent comprises a sequence selected from the group consisting of angiotensinogen, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO: 32, SEQ ID NO:33, SEQ ID NO: 34; SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, and SEQ ID NO:39.

59.(New) The method of claim 43 wherein the active agent consists of a sequence selected from the group consisting of angiotensinogen, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO: 32, SEQ ID NO:33, SEQ ID NO: 34; SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, and SEQ ID NO:39.